

2 (a) a plurality of inner conductive patterns alternating with a
3 plurality of interstitial via holes;

4 (b) respective insulating layers, one of said insulating layers
5 above a top one of said inner conductive patterns, another below a bottom one of
6 said conductive patterns;

7 (c) respective outer conductive patterns formed on respective
8 outer surfaces of said insulating layers; and

9 (d) respective surface holes formed in each of said insulating
10 layers to expose said top one and bottom one of said inner conductive patterns,
11 each of said surface holes filled with plating material in contact with said outer
12 conductive patterns.

1 18. (Amended) A method of manufacturing a multilayer printed wiring
2 board, said method comprising the steps of:

3 (a) preparing an inner layer material,

4 said inner layer material comprising

5 a plurality of inner conductive patterns alternating with a
6 plurality of interstitial via holes;

7 (b) providing respective insulating layers, one of said insulating
8 layers above a top one of said inner conductive patterns, another below a bottom
9 one of said conductive patterns;

10 (c) forming respective outer conductive patterns on respective
11 outer surfaces of said insulating layers;

12 (d) forming respective surface holes in each of said insulating
13 layers to expose said top one and bottom one of said inner conductive patterns, and

14 (e) filling said surface holes with plating material in contact with
15 said outer conductive patterns.

1 19. (Amended) The manufacturing method of a multilayer printed wiring
2 board according to Claim 18, wherein said inner layer material includes an
3 insulating substrate,

4 a method for preparing said inner layer material comprises the steps
5 of:

6 (i) forming a through hole in a sheet like resin prepreg
7 comprising a base material and a resin impregnated to said base material,

8 (ii) filling a conductive paste in said through hole,

9 (iii) superimposing a metal foil on both sides of said resin prepreg
10 having said conductive paste, respectively,

11 (iv) applying a pressing force to said resin prepreg having said
12 conductive paste with said metal foil superimposed thereon while heat being
13 applied thereto,

14 thereby forming said insulating substrate as a result of hardening of
15 said resin prepreg,

16 joining said insulating substrate and said metal foil together by
17 adhesion and

18 forming said interstitial via hole as a result of hardening of said
19 conductive paste, and

20 (v) forming said inner conductive pattern by having said metal foil
21 worked on.

1 20. (Amended) The manufacturing method of a multilayer printed wiring
2 board according to Claim 19,

3 wherein said through hole and said surface holes are formed by laser
4 beam machining.

1 21. (Amended) The manufacturing method of a multilayer printed wiring
2 board according to Claim 19,

3 wherein said step of forming said surface holes comprises the step of:

4 eliminating metal foil located on an area where said non-through hole
5 is to be formed; and

6 forming said non-through hole at a position where said metal foil is
7 eliminated.

1 22. (Amended) The manufacturing method of a multilayer printed wiring
2 board according to Claim 18,

3 wherein said step of connecting electrically between said outer
4 conductive patterns and said inner conductive patterns includes a step of applying a
5 metal plating to said non-through hole.

1 23. (Amended) The manufacturing method of a multilayer printed wiring
2 board according to Claim 18,

3 wherein said step of forming surface holes on said metal foil with
4 insulating resin further comprises the steps of:

5 eliminating metal foil in an area where said non-through hole is
6 formed; and

7 forming said surface holes by irradiating a laser beam having a
8 diameter larger than a diameter required of said non-through hole in said area
9 where said metal foil is eliminated.

1 27. (Amended) The manufacturing method of a multilayer printed wiring
2 board according to Claim 18,

3 further comprising step of connecting electrically between said outer
4 conductive pattern and said inner conductive pattern, said step further comprises
5 the steps of:

- 6 applying a metal plating to said surface holes; and
7 applying metal plating on a surface of said outer conductive patterns.

1 28. (Amended) The manufacturing method of a multilayer printed wiring
2 board according to Claim 19,

3 wherein at least one of said surface holes and said through holes
4 range from about 30 μm to about 100 μm in diameter.

1 29. (Amended) The manufacturing method of a multilayer printed wiring
2 board according to Claim 18,

3 wherein said step of forming said inner layer material includes a step
4 of forming a plurality of insulating substrates and a plurality of inner conductive
5 patterns, each of plurality of inner conductive patterns is disposed, respectively, on
6 both sides of said each respective insulating substrate.